



Source Water Assessment Program (SWAP) Report for Granby Heights Condominium

What is SWAP?

The Source Water Assessment Program (SWAP), established under the federal Safe Drinking Water Act, requires every state to:

- inventory land uses within the recharge areas of all public water supply sources;
- assess the susceptibility of drinking water sources to contamination from these land uses; and
- publicize the results to provide support for improved protection.

SWAP and Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Prepared by the
Massachusetts Department of
Environmental Protection,
Bureau of Resource Protection,
Drinking Water Program

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Table 1: Public Water System (PWS) Information

<i>PWS Name</i>	Granby Heights Condominium
<i>PWS Address</i>	State Route 116
<i>City/Town</i>	Granby, Massachusetts
<i>PWS ID Number</i>	1111003
<i>Local Contact</i>	Mr. John C. Young
<i>Phone Number</i>	413-785-5312 ext. 102

<i>Well Name</i>	<i>Source ID#</i>	<i>Zone I (in feet)</i>	<i>IWPA (in feet)</i>	<i>Source Susceptibility</i>
Well #1	1111003-01G	221	543	Moderate
Well #2	1111003-02G	221	543	Moderate

Introduction

We are all concerned about the quality of the water we drink. Many potential contaminant sources, including septic systems, road salt and improperly disposed of hazardous materials may threaten the quality of water from drinking water wells. Citizens and local officials can work together to better protect drinking water sources.

Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential contaminant sources, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes:

1. Description of the Water System
2. Discussion of Land Uses within Protection Areas
3. Recommendations for Protection
4. Attachments, including a Map of the Protection Areas

1. Description of the Water System

The Granby Heights Condominium complex is located south of Route 116 and consists of two buildings with a total of 76 units that are heated by electric heat. Currently, approximately 135 people reside at the complex. The facilities include a tennis court, a swimming pool, parking, lawn and wooded areas. The facility is served by onsite septic disposal. Granby does not have a municipal water supply, however, South Hadley's water system extends to within one-quarter mile of the facility. The complex is served by two wells, Wells #1 (01G) and #2 (02G) that pump simultaneously to the storage tank.

The Zone I and Interim Wellhead Protection Area radii for Wells #1 and #2 are 221 feet and 543 feet, respectively. The protective radii were based on metered usage for the two highest months on record for the wells. Please refer to the attached map that shows the

What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by the water supplier and limited to water supply activities.

- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

Zone I and IWPA radii. The Zone I is the area immediately around the wellhead while the IWPA is a larger area that likely contributes water to the wellhead. The IWPA is only an interim protection area; the actual area of contribution to the wells may be larger or smaller.

Well #1 is a 6-inch diameter well drilled into the bedrock aquifer. Well #1 is located in a concrete pit in the parking area and is nearly flush with the floor of the pit. The pit has a watertight manhole access port and is approximately six feet deep. There is no drain in the pit. Although there was moisture approximately 18-inches up on the wall of the pit, there was no obvious evidence of flooding in the pit. Well #2 is located adjacent to the swimming pool and extends approximately 12-inches above grade. At the time of the assessment, the cover of Well #2 was not secure and the slope on the hillside was slumping allowing for ponding of water around the wellhead.

The complex is located on an upland area believed to be underlain by till and shallow bedrock. The bedrock is mapped as Mesozoic sedimentary and volcanic units consisting of conglomerate, sandstone and basalt. There are no detailed records of the well construction or of the materials encountered during drilling. However, records do indicate Well #1 is approximately 300 feet deep and Well #2 is approximately 290 feet deep. Pumps in both wells are set at 260 feet. Wells drilled in these conditions are considered highly vulnerable to potential contamination from the ground surface because there is no significant hydrogeologic barrier, such as clay, to prevent surface contamination from migrating into the bedrock aquifer.

The Granby Heights Condominium well water does not require and does not have treatment at this time. For current information on monitoring results, please review the Consumer Confidence report (CCR) that is issued annually by the water supplier or refer questions to the water supply contact listed above in Table 1.

2. Discussion of Land Uses in the Protection Areas

A number of land uses and activities within the drinking water supply protection areas are potential sources of contamination. Therefore, the overall ranking of susceptibility to contamination for the wells is moderate, based on the presence of moderate threat land use or activity in the Zone I and IWPA, as seen in Tables 2 and 3.

Table 2: Table of Activities Common to the Protection Areas

Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Parking lots and driveways	Both Wells	Both Wells	Moderate	Limit road salt usage and provide drainage away from wells
Transformers (above and below grade)	Both Wells	Both Wells	Moderate	Potential release of MODF
Septic system components	Both Wells	Both Wells	Moderate	Lines and tank in Zone I, leachfield in IWPA
Pool and related chemical storage and backwash discharge	Well #1	Well #2	Moderate	Use Best Management Practices, containment

* -For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - www.state.ma.us/dep/brp/dws/.

Table 2: Table of Activities Common to the Protection Areas (Continued)

Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Residential homes, lawns and parking	Well #1	Both Wells	Moderate	Household hazardous materials, pesticides and herbicides
Storm drains	Both Wells	Both Wells	Low	Road salt, spills and runoff

* -For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - www.state.ma.us/dep/brp/dws/.

Key Land Use Issues for the Wells include:

1. Non-conforming activities in the Zone I
2. Wellhead sanitary seal
3. Residential homes

1. Non-conforming activities in the Zone Is – The Zone I for both Wells #1 and #2 are non-conforming with respect to MA DEP land use restrictions, which allow only water supply related activities in Zone Is. The Zone I for Wells #1 and #2 contain all activities associated with the facility: parking, roadways, transformers and residential buildings. Please note that systems not meeting DEP Zone I requirements must receive DEP approval and address Zone I issues prior to increasing water use, modifying systems or conducting any activities within Zone I.

Recommendations:

- ✓ Do not conduct any additional activities within the Zone I. Contact MA DEP prior to conducting any activities within Zone I.
- ✓ Prepare an emergency response plan for responding to an accidental release.
- ✓ Encourage residents to utilize Granby's household hazardous waste collection days.
- ✓ Monitor parking lots for spills and leaks.

2. Wellhead integrity – There is a watertight manhole cover for Well #1 and there is no apparent sanitary seal on Well #2.

Recommendations:

- ✓ Inspect the integrity of the watertight manhole gasket at least four times per year. Be diligent in setting the gasket properly.
- ✓ Install watertight seals on all wellhead connections in Well #1. Continue the current practice of monitoring the vault periodically to be sure that groundwater does not enter the vault.
- ✓ Install a sanitary seal on Well #2.

3. Residential homes – Residential development includes the condominium complex and an abutting residential neighborhood. Normal residential activities pose minimal threat to the water quality of the public water supply as well as their own private supply provided homeowners are aware of the potential hazards of household waste, lawn care chemicals, animal waste and septic systems and they utilize best management practices.

Recommendations:

- ✓ Provide residents with information about protecting the facilities resources. Include information on Best Management Practices (BMPs) for the use of pesticides, household hazardous waste and septic system maintenance and disposal practices.
- ✓ Encourage residents to utilize Granby's household hazardous waste collection days and paint exchange program.

Other activities identified in the protection areas are stormwater discharges located within the Zone I and IWPA of the wells. The condominium should use BMPs and include periodic cleaning of catch basins and street sweeping. Street sweepings and catch basin cleanings are considered solid waste and should be handled as described in the DEP's policy.

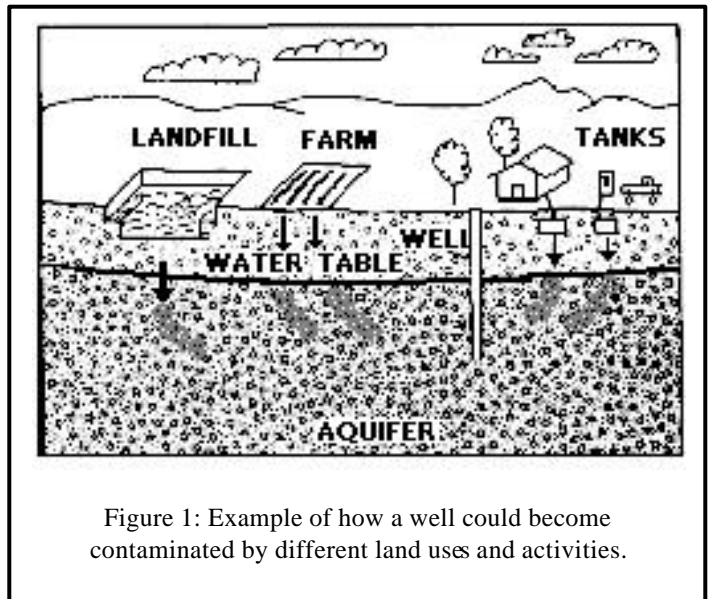


Figure 1: Example of how a well could become contaminated by different land uses and activities.

Glossary

Zone I: The area closest to a well; a 100 to 400-foot radius proportional to the well's pumping rate. To determine your Zone I radius, refer to the attached map.

IWPA: A 400-foot to ½ mile radius around a public water supply well proportional to its pumping rate; the area DEP recommends for protection in the absence of a defined Zone I. To determine IWPA radius, refer to the attached map.

Zone II: The primary recharge area defined by a hydrogeologic study.

Aquifer: An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: An underground layer of impermeable material that resists penetration by water.

Recharge Area: The surface area that contributes water to a well.

For More Information:

Contact Catherine Skiba in DEP's Springfield Office at (413) 755-2119 for more information and for assistance in improving current protection measures.

More information relating to drinking water and source protection is available on DEP's web site at:
www.state.ma.us/dep/brp/dws.

Work with the DEP, State highway and local officials regarding protecting the water supplies through emergency response coordination, especially with respect to spills and accidental releases that may be discharged through storm drains.

3. Protection Recommendations

To reduce the system's susceptibility to contamination, the Granby Heights Condominium should review and adopt the following recommendations:

Zone I and IWPA:

- ✓ Keep all new non-water supply activities out of the Zone I.
- ✓ Please note that water systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use, modifying their system or conducting any additional non-conforming activities in Zone I.
- ✓ Consider well relocation if Zone I threats cannot be mitigated.
- ✓ Prohibit public access to the wells by locking facilities and posting signs at the facility entrance. Check the integrity of the well caps regularly and replace as necessary.
- ✓ Conduct regular inspections of the Zone I. Look for illegal dumping, evidence of vandalism, check any aboveground tanks for leaks, etc.
- ✓ Consider alternative sites for a new well and protect that land for future use through purchase or conservation restriction that would prohibit potentially threatening activities.
- ✓ Work with the local fire department, DEP, State highway, and local officials regarding protecting the water supplies through emergency response coordination.
- ✓ Be sure that the town is aware that your facility is a public water supply so that you can be notified of any accidents or threats from accidents. Ask that your facility be included in Town wide water supply protection efforts.

Training and Education:

- ✓ Continue staff training on proper hazardous material use, disposal, emergency response, and best management practices; include custodial staff, certified operator, and other appropriate staff.
- ✓ Maintain the drinking water protection area signs at key visibility locations.

Facilities Management:

- ✓ Implement standard operating procedures regarding proper storage, use and disposal of any hazardous materials at the facility. To learn more, see the hazardous materials guidance manual at www.state.ma.us/dep/bwp/dhm/dhmpubs.html.
- ✓ Continue utilizing Best Management Practices (BMPs) for the use of fertilizers pesticides on facility property.
- ✓ For utility transformers that may contain PCBs, contact the utility to determine if PCBs have been replaced. Especially the transformers in Zone I. If PCBs are present, urge their immediate replacement. Keep the area near the transformer free of tree limbs that could endanger the transformer in a storm.

Planning:

- ✓ Work with local officials in town to include the facility IWPA in an Aquifer Protection District Bylaws and to assist you in improving protection.
- ✓ Have a plan to address short-term water shortages and long-term water demands. Keep the phone number of a bottled water company readily available.
- ✓ Supplement the SWAP assessment with additional local information and incorporate

Additional Documents:

To help with source protection efforts, more information is available by request or online at

www.state.ma.us/dep/brp/dws

including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix

Copies of this assessment have been provided to the public water supplier, town boards, and the local media.

it into water supply educational efforts. Use a potential contaminant threat inventory to assist in setting priorities, focusing inspections, and creating educational activities.

These recommendations are only part of your ongoing local drinking water source protection. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures.

4. Attachments

- Maps of the Public Water Supply (PWS) Protection Areas
- Recommended Source Protection Measures Fact Sheet
- Pesticide Use Fact Sheet
- Fertilizer Use Fact Sheet

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